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TAXONOMIC CHANGES IN CADDIS-FLY SPECIES FROM THE SOUTH-WEST PACIFIC-AUSTRALIAN REGION WITH DESCRIPTIONS OF NEW SPECIES (INSECTA: TRICHOPTERA)

By A. Neboiss

Department of Entomology, Museum of Victoria, 71 Victoria Cresent, Abbotsford, Victoria 3067, Australia

Abstract

Neboiss, A. (1986) Taxonomic changes in caddis-fly species from the South-west Pacific-Australian region with descriptions of new species (Insecta: Trichoptera). *Mem. Mus. Vict.* 47: 213-223.

Three new species of *Agapetus* are described, *A. ablusus* sp. nov. and *A. diacanthus* sp. nov. from Victoria, Australia, and *A. nokowoula* sp. nov. from Vanuatu. Two New Guinea species– *S. productus* Kimmins and *S. apalapsili* Malicky, and one– *S. salomonis* Kimmins from Guadalcanal are transferred from *Synagapetus* McLachlan to *Agapetus* Curtis, but the New Guinea species *S. anoaclana* Malicky is transferred to *Chimarra* Stephens. The generic name *Sciops* McLachlan (Sulawesi and Borneo) is removed from the Australian list by transfer of two species– *S. spinata* Banks and *S. inermis* Banks to the genus *Diplectrona* Westwood. Two other *Diplectrona* Westwood species– *D. bifurcata* Kimmins and *D. bispinosa* Jacquemart are transferred to *Austropsyche* Banks. The New Guinea species *Anisocentropus testaceus* Navás is placed in the genus *Hydropsyche* Pictet. The genus *Neureclipsis* McLachlan is recorded from Australia with a new species *N. napaea* from Victoria; *Tasiagma eremica* sp. nov. is described from Lord Howe Island; *Goera aneityuna* sp. nov. is a new species from Vanuatu; two new species of *Anisocentropus*–*A. hyboma* sp. nov. and *A. pictilis* sp. nov. are described from New Guinea and Woodlark Island respectively and *Symphitoneuria licmetica* sp. nov. is described from New Caledonia.

Introduction

While accumulating information on the caddis-fly fauna of the South-west Pacific-Australian region a number of taxonomic discrepancies were noted which require amendments. There were also some undescribed species either of immediate interest to environmental studies, or which add important information to caddis-fly distributions. These changes and descriptions are presented in this paper.

The following abbreviations are used for repositories of material: ANIC–Australian National Insect Collection, Canberra; BMNH–British Museum (Natural History), London; BPBM–Bernice P. Bishop Museum, Honolulu; IRSN–Institut Royal des Sciences Naturelles de Belgique, Brussels; MCG–Museo Civico di Storia Naturale, Giacomo Doria, Genoa; MCZ–Museum of Comparative Zoology, Harvard University, Cambridge, Mass.; NMV-Museum of Victoria, Melbourne; SAM–South Australian Museum, Adelaide.

All dissected and figured specimens are identified by the author's notebook number with the prefix 'PT-'. Where available, museum type registration numbers are included.

Systematics

Glossosomatidae

Only the subfamily Agapetinae is known to occur in the South-west Pacific-Australian region, however, it is absent from New Zealand and from the western half of Australia. The classification of this group is rather unsettled.

Some species appear under the generic name *Agapetus* Curtis, others as *Synagapetus* McLachlan. The latter was reduced to subgeneric level by Ross (1956) but some authors (Kimmins, 1962; Malicky, 1978) still continue to use *Synagapetus* McLachlan as a valid genus. Comments on classification were made in a paper by Schmid (1959). He agreed with Ross (1956) in subdividing *Agapetus* into three subgenera: *Tagapetus* Ross, *Agapetus* s. s. and *Synagapetus* McLachlan. Schmid (1959) also regarded that all the Australian species are closest to *Agapetus* s. s. in all their features, but has an additional cross-vein se-r near anastomosis in hindwing. Recent observations show that the cross-vein se-r is not present in all species. In accordance with Schmid's arguments the South-west Pacific species described as *Synagapetus–S. salomonis* Kimmins, 1957 (Guadalcanal), *S. productus* Kimmins, 1962 (Papua New Guinea) and *S. apalapsili* Malicky, 1978 (Irian Jaya) should be referred to Agapetus s. s.

The uniting characters for the South-west Pacific-Australian *Agapetus* s. s. species is a blister-like protuberance on the lateral margin of sternite 5, present in both sexes (not in males only as stated by Ross, 1956), and the widened midleg tibiae and tarsi in females.

Agapetus nokowoula sp. nov.

Figures 1-4

Type material.

Holotype ♂, Vanuatu (New Hebrides), Espirito Santo Island (15°50'S., 166°50'E.), Nokowoula, 1132 m, 12 Sep 1971, G.F. Gross (Genitalia prep. PT-1278 figured)(SAM).

Description. Wing colour uniform dark brownish-black. Abdominal sternite 5 with blister-like protuberance small, oval, domeshaped; strong ventral process on sternite 6, a small one on sternite 7; anterior margin of segment 9 broadly triangular, broad dorsally, superior appendages short and broad, almost rectangular; tergite 10 short, in lateral view broadly triangular; inferior appendages robust, apically with horizontally orientated triangular mesal lobe. Phallus with sclerotized internal rods.

Female unknown.

Length of forewing: ♂ 4.2 mm.

Distribution. Vanuatu (known from the type locality only).

Remarks. This is the first record of the genus from Vanuatu (New Hebrides). The species identity is based on male genital characters.

Agapetus diacanthus sp. nov.

Figures 5, 6

Type material.

Holotype ♂, Australia, Victoria, O'Shanassy River, 20 Jan 1983, A.Neboiss (NMV T-8161); paratypes 30♂♂ collected with holotype (Genitalia prep. PT-1246 figured) (ANIC; BMNH; NMV).

Description. Blister-like protuberance on sternite 5 small, oval, somewhat flattened; sternite 6 with moderately large ventral process; middle of anterior margin of segment 9 extended, broadly triangular; superior appendages elongate, slightly expanded distally; tergite 10 elongate, broad at base, distinct dorsolateral spine near distal end; inferior appendages short, robust, with two mesally direeted spines near apex, one situated at dorsal, the other at ventral margin, the lower one distinctly shorter. Phallus with long, sclerotized internal spines.

Female not positively associated.

Length of forewing: ♂ 4-5 mm.

Distribution. Central Victoria.

Remarks. Dark, blackish species, separated from *A. monticolus* Banks by distinct male genitalia.

Agapetus ablusus sp. nov.

Figures 7-12

Type material.

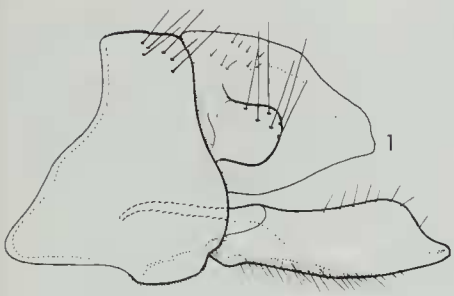
Holotype ♂, Australia, Victoria, Dee River 2 km NW. of Millgrove, 24 Feb 1976, A. Neboiss (NMV T-8178).

Figures 1-4, *Agapetus nokowoula* sp. nov.: 1, male genitalia lateral; 2, male sternites 6 and 7 with ventral processes; 3, phallus lateral; 4, male genitalia ventral.

Figures 5, 6, *Agapetus diacanthus* sp. nov.: 5, male genitalia lateral; 6, male genitalia ventral.

Figures 7-12, *Agapetus ablusus* sp. nov.: 7, male genitalia lateral; 8, male sternite 6 with ventral process; 9, male genitalia dorsal; 10, male genitalia ventral; 11, male wing venation; 12, female abdomen lateral.

Figures 13, 14, *Hydropsyche testacea* (Navás): 13, female wing venation; 14, female genitalia lateral.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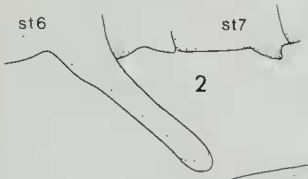
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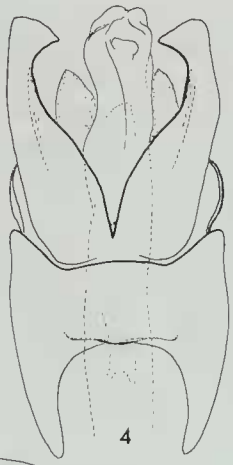
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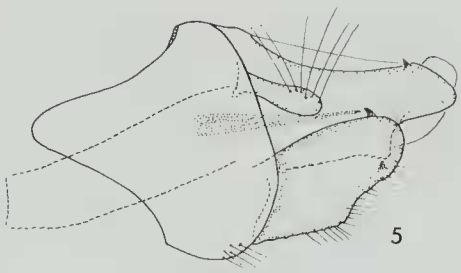
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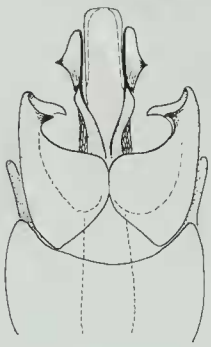
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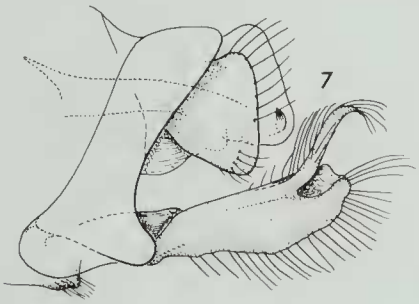
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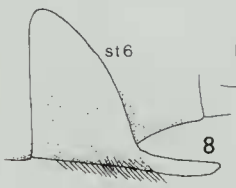
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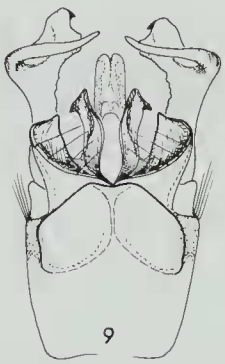
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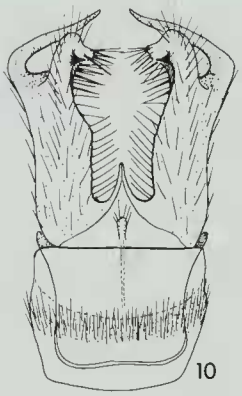
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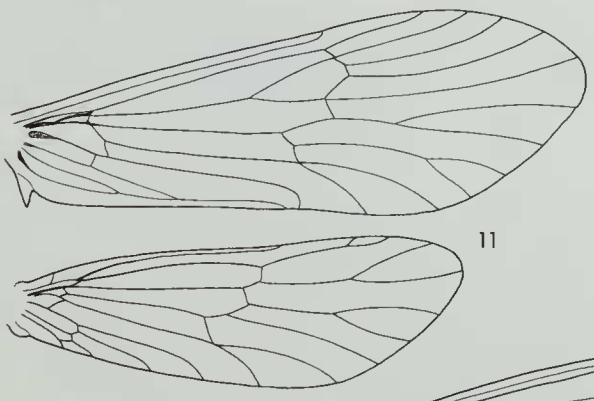
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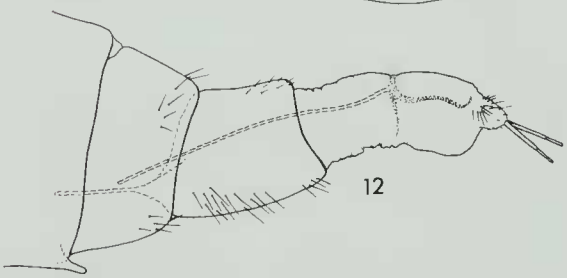
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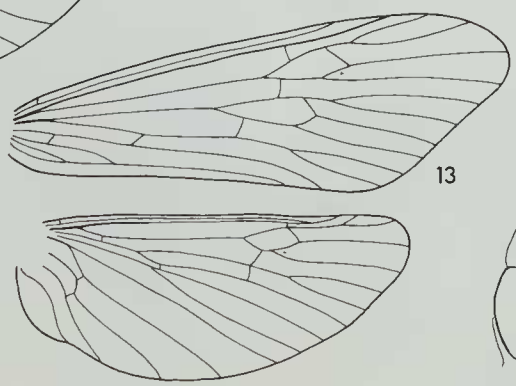
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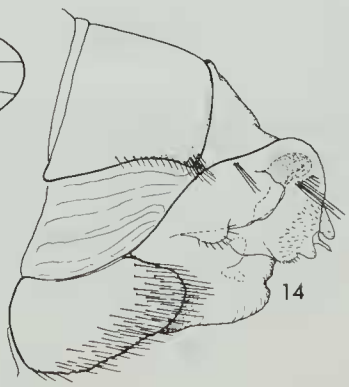
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Paratypes 2♂♂, collected with holotype (Genitalia prep. PT-1312 figured); 2♂♂, Cement Creek nr Warburton, 22 Feb 1953, A. Neboiss; 4♂♂, 1♀, same loc., 5 Feb 1955, A. Neboiss; 1♂, Millgrove, 9 Jan 1957, A. Neboiss; 3♂♂, Britannia Creek nr Warburton, 27 Jan 1976, A. Neboiss; 2♂♂, 3 km W. of Beenak, 7 Jan 1972, A. Neboiss; 2♂♂, 2♀♀, 3 km SW. of Tanjil Bren, 13 Jan 1981, A. Neboiss; 6♂♂, Upper Acheron River (Acheron Gap), 9 Jan 1957, A. Neboiss (ANIC; BMNH; NMV).

Other material examined. Australia, Victoria–Dandenong Mts. Sassafras Creek; Yea River nr Toolangi; Tarra River, National Park.

Description. The blister-like protuberance elongate-oval; sternite 6 with long, slender ventral process; segment 9 in lateral view narrow, lateral lobe at the base of inferior appendage; superior appendages short, very broad, somewhat triangular; segment 10 short; inferior appendages elongate, dorso-apical angle extended into long, curved, distally pointed process, lower apical section wide with short triangular mesal spine.

Female with distinctly widened and flattened tibiae and tarsi of midlegs, short ventral process on sternite 6; abdomen terminates with a pair of slender, two segmented cerci.

Length of forewing: ♂ 4-5 mm; ♀ 3.8-4.6 mm.

Distribution. Central Victoria.

Remarks. Dark, brownish species, positive identification by distinct male genitalia.

Agapetus productus (Kimmins) comb. nov.

Synagapetus productus Kimmins, 1962:102, fig. 3.

Type material.
Holotype ♂, New Guinea, Papua New Guinea, Kokoda (8°52′S., 147°45′E.), 400 m, Sep 1933, L.E. Cheesman (BMNH). Type not examined.

Material examined. Papua New Guinea, Mt Lamington, 500 m, June 1966, P. Shanahan (BPBM).

Distribution. New Guinea (central highlands).

Remarks. This species, according to Kimmins (1962), is closely related to *Agapetus jafiwi* Ross.

Agapetus salomonis (Kimmins) comb. nov.

Synagapetus salomonis Kimmins, 1957:291, fig. 3.

Type material.
Holotype ♂, Guadalcanal (9°32′S., 160°12′E.), Tapenanje, 10-15 Dec 1953, L.E. Cheesman (BMNH). Type not examined.

Remarks. Kimmins (1957) suggested that this species is nearest to *Agapetus cralus* (Mosely) but differs in more quadrate superior appendages and narrower inferior appendages.

No new material is available

Agapetus apalapsili (Malicky) comb. nov.

Synagapetus apalapsili Malicky, 1978:163, fig. 4A-E.

Type material.
Holotype ♂, New Guinea, Irian Jaya, Apalapsili, 900 m, 15-17 Nov 1971, E. Diehl (Collection Malicky). Type not examined.

Remarks. The description and figures of this species show similarities to *Agapetus latosus* Ross.

No new material is available.

Philopotamidae

Chimarra anoaclana (Malicky) comb. nov.

Synagapetus anoaclana Malicky, 1978:163, fig. 4F-J.

Type material.
Holotype ♂, New Guinea, Irian Jaya, Apalapsili 900 m, 15-17 Nov 1971 (Collection Malicky). Type not examined.

Distribution. New Guinea (Irian Jaya).

Remarks. The author has informed me (in litt. June 1984) that this species has been wrongly included in the genus *Synagapetus* instead of the genus *Chimarra* and asked me to rectify this error.

No new material is available.

Figures 15, 16, *Diplectrona inermis* (Banks): 15, male genitalia lateral; 16, male genitalia ventral.

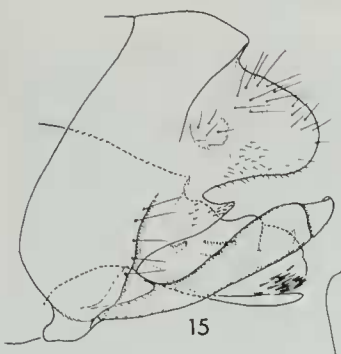
Figures 17, 18, *Diplectrona spinata* (Banks): 17, male genitalia lateral; 18, male genitalia ventral.

Figure 19, *Austropsyche bispinosa* (Jacquemart): male genitalia lateral.

Figures 20, 21, *Austropsyche bifurcata* (Kimmins): 20, male genitalia lateral; 21, male genitalia ventral.

Figures 22-25, *Neureclipsis napaea* sp. nov.: 22, male genitalia lateral; 23, male genitalia ventral; 24, male wing venation; 25, female genitalia lateral.

Figures 26-28, *Tasiagma eremica* sp. nov.: 26, male genitalia lateral; 27, male genitalia dorsal; 28, male genitalia ventral.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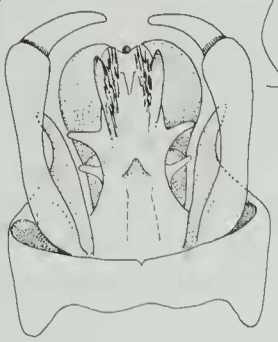
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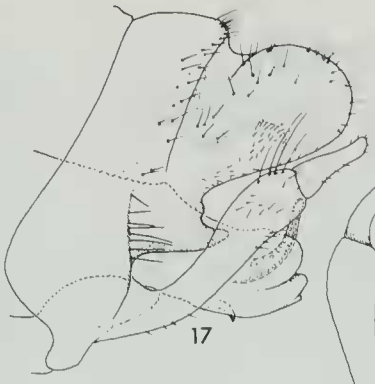
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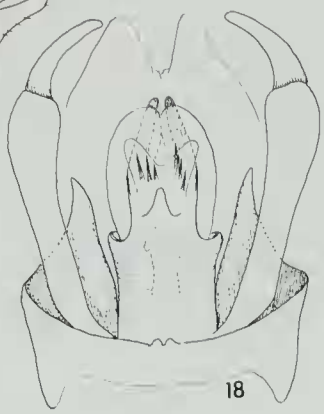
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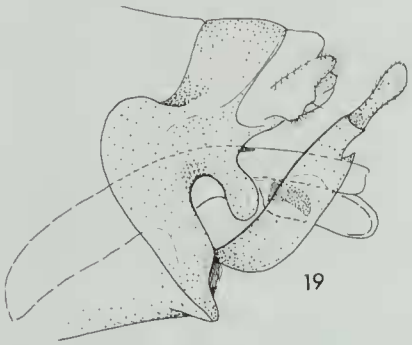
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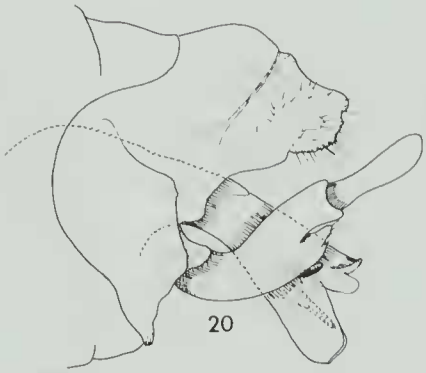
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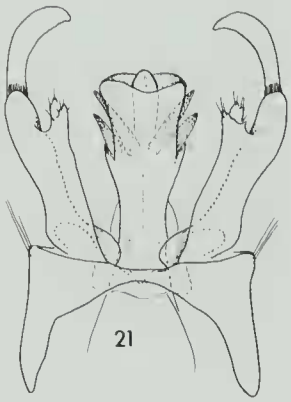
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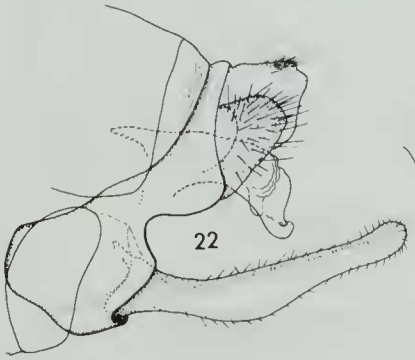
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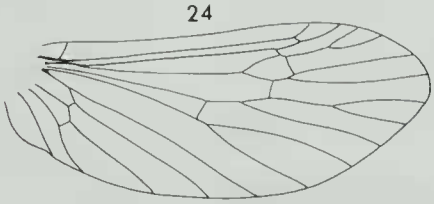

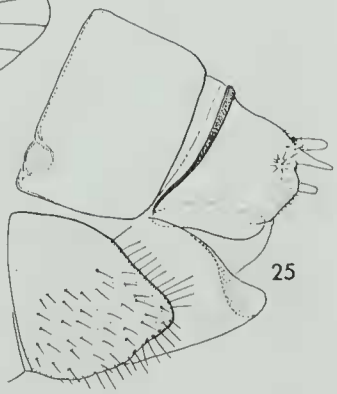
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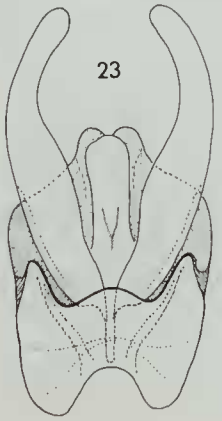
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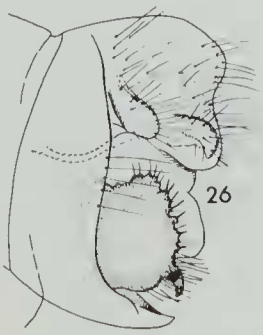
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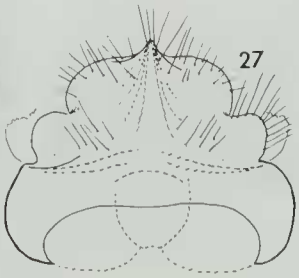
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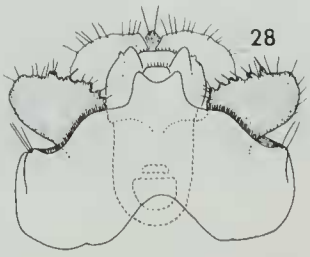
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Hydropsychidae

Hydropsyche testacea (Navás) comb. nov.

Figures 13, 14

Anisocentropus testaceus Navás, 1933:104, fig. 93.

Type material.
Holotype ♀, New Guinea, Papua New Guinea, Moroka (9°25'S., 147°35'E.), 1300 m, Jul-Nov 1893, Loria (MCG) (Genitalia prep. PT-1411 figured)

Other material examined. New Guinea, Papua New Guinea, Adelbert Mt. Wanuma, 800-1000 m (4°50'S., 145°25'E.), 24 Oct 1958, J.L. Gressitt (BPBM).

Distribution. New Guinea (known from type locality only).

Remarks. The original figure of forewing clearly indicates that the species does not belong to the genus *Anisocentropus*, but is a member of the family Hydropsychidae. Examination of the holotype confirmed its placement in the genus *Hydropsyche*.

The wing venation is *Hydropsyche*-like, with short discoidal cell in both wings, cross-vein cu in forewing situated well basad of cross-vein m-cu; the postero-lateral angle of abdominal tergite 8 slightly extended downward and covered with group of hairs; a distinct inferior appendage receptacle on tergite 9.

Male unknown.

Length of forewing: ♀ 19.5-20.5 mm.

Diplectrona inermis (Banks) comb. nov.

Figures 15, 16

Sciops inermis Banks, 1939:494, figs. 9, 11.

Type material.
Holotype ♂, Australia, New South Wales, Wentworth Falls, Blue Mts., 3 Jan (1932), P.J. Darlington, Harvard Exped. (ANIC). Type examined.

Other material examined. New South Wales–Katoomba, Cascades (Feb.); Leura (Dec).

Distribution. New South Wales (Blue Mts.).

Remarks. Banks (1939) described two Australian species *Sciops inermis* and *S. spinata*. Both species are characterised by having abdominal segments 6 and 7 with reticulate internal membranous sacks and lateral filaments on sternite 5. These structures are not found in the genus *Sciops* McLachlan but are present and similar to all other Australian species in the genus *Diplectrona* Westwood. Both species are therefore transferred to the latter genus and *Sciops* McLachlan is removed from the Australian faunal list.

The species *D. inermis* (Banks) is recognized by the details of male genitalia, particularly the position of phallic spines as illustrated in Fig. 16.

Female unknown.

Length of forewing: ♂ 6.5 mm.

Diplectrona spinata (Banks) comb. nov.

Figures 17, 18

Sciops spinata Banks, 1939:493, fig. 31.
Diplectrona bourina Mosely, in Mosely & Kimmins, 1953:345, fig. 239, syn. nov.

Type material.
Holotype ♂, Australia, Queensland, McPherson Range, 1000 m, 13 Mar (1932), P.J. Darlington, Harvard Exped. (ANIC). Type examined.

Holotype ♂ of *Diplectrona bourina* Mosely, Queensland, Tambourine Mts. 11-18 Apr 1935, R.E. Turner (BMNH). Type examined.

Other material examined. Queensland–Springbrook (Oct); Killarney, Queen Mary Falls (Oct).

Distribution. Queensland (south-east).

Remarks. The synonymy was already suspected by Mosely (1953) and is here confirmed by comparison of the two types. Species identity based on details of male genitalia.

Female unknown.

Length of forewing: ♂ 6-7 mm.

Austropsyche bispinosa (Jacquemart) comb. nov.

Figure 19

Diplectrona bispinosa Jacquemart, 1965:25, fig. 20.–Neboiss, 1974:14.–1977:73, fig. 363.

Type material.
Holotype ♂, Australia, Victoria, Sassafras, 20 Oct (1922), A.Tonnoir (IRSN). Type mounted on three microscope slides. Type examined.

Distribution. Victoria (east-central mountains).

Remarks. The species has all the characteristics of the genus *Austropsyche*, particularly the shape of segment 9 and the inferior appendages.

Female unknown.

Length of forewing: ♂ 12 mm.

Specimens collected in the Dandenong Ranges, Victoria (Sassafras Creek) confirms previously expressed opinion that the type locality is in Victoria (Neboiss, 1974) and not Tasmania as originally recorded by Jacquemart (1965).

Austropsyche bifurcata (Kimmins) comb. nov.

Figures 20, 21

Diplectrona bifurcata Kimmins, in Mosely & Kimmins, 1953:344, fig. 238.

Type material.

Holotype ♂, Australia, New South Wales, Mt Kosciusco, 1500 m, 24 Jan 1914, R.J. Tillyard (BMNH). Type examined.

Other material examined. New South Wales–Dead Horse Gap (Jan); Australian Capital Territory–Bendora (Dec), Mt Gingera (Jan); Victoria–Kanuka Creek (Mar).

Distribution. South-eastern Australia.

Remarks. The examination of the holotype and several other specimens of this species confirms that it is a member of the genus *Austropsyche*, typified by the shape of segment 9 and the inferior appendages.

Female unknown.

Length of forewing: ♂ 11 mm.

Polycentropodidae

Neureclipsis McLachlan

Neureclipsis McLachlan 1864:30.

Type species. Phryganea bimaculata Linnaeus, 1758.

Diagnosis. The genus is diagnosed by slender maxillary palpi; segments 1 and 2 short, segment 3 long, slender, segment 4 shorter, segment 5 about as long as first four together; antennae stout, basal segment short, bulbous; head with large postero-lateral setal warts.

Forewings elongate, venation complete; forks 1, 2, 3, 4 and 5 present in forewing; forks 1, 2, 3 and 5 in hindwing; discoidal cell present and closed in both wings; cross-vein c-sc present in Australian species.

Spurs 3:4:4; midleg tibiae and tarsi dilated in females.

Remarks. The genus *Neureclipsis* McLachlan is here recorded for the Australian fauna for the first time, otherwise it is widely distributed through Nearctic and Palearctic regions. The general form of male genitalia and the wing venation is characteristic of the genus, except that in the Australian species the cross-vein c-sc is present in forewing and the cross-vein m-cu in hindwing is positioned more basally.

Neureclipsis napaea sp. nov.

Figures 22-25

Type material.

Holotype ♂, Australia, Victoria, Mitta Mitta River 8 km NE. of Benambra, 5 Feb 1974, A. Neboiss (NMV T-8198).

Paratypes 30♂♂, 20♀♀ collected with holotype (ANIC; BMNH; NMV).

Other material examined. Victoria–Gibbo River nr Omeo; Albert River nr Hiawatha; Tanjil River nr Willow Grove; Howqua River nr Merrijig; Cobungra River nr Anglers Rest; Thomson River at Cowwarr, Knapings Clearing and Bells Clearing; Wellington River nr Licola; Macalister-Barkley River junction; Aberfeldy River at Walhalla road bridge; Dargo River nr Dargo (dates range from mid-November to early March).

Diagnosis. Details as in generic description. Male genitalia with inferior appendages moderately robust, slightly curved; apex of phallus curved downward. Female abdominal tergite 9 with narrow selerotized transversal ridge at basal margin. Other male and female genitalia structures as illustrated in figures 22, 25.

Length of forewing: ♂ 5.5-6 mm; ♀ 6.5-7 mm.

Distribution. Victoria (east-central mountains).

Tasimiidae

Tasiagma eremica sp. nov.

Figures 26-28

Type material.

Holotype ♂, Lord Howe Island (31°33'S., 159°05'E.),

Erskine Valley Station, 10 Nov 1983, G.W. Gibbs (NMV T-8220).

Paratype ♂ collected with holotype (Genitalia prep. PT-1330 figured) (NMV).

Description. Colour greyish-brown, wings without colour pattern and without scale-like setae on main longitudinal veins, otherwise similar to the Australian species. Abdominal segments without proeesses; distal margin on tergite 9 produeed into sharply bipointed lobe; segment 10 raised mid-dorsally to a distinet keel; superior appendages short, rounded; inferior appendages short, broad, darkly pigmented, inner surface densely spinose; phallus short, broad, lower distal margin extended downward into a distinet lobe.

Female unknown.

Length of forewing: ♂ 6 mm.

Distribution. Lord Howe Island (known from type locality only).

Remarks. This species is distinguished from the Australian speeies *Tasiagma ciliata* Neboiss by details of the male genitalia.

Goeridae

Goera aneityuma sp. nov.

Figures 29-32

Type material.

Holotype ♂, Vanuatu (New Hebrides), Aneityum (20°12′S,. 169°45′E.), Red Crest, 400 m, 5 km NE. of Anelgauhat, May 1955, (BMNH) (Genitalia prep. PT-1352 figured).

Paratypes 4♂♂, 10♀♀, collected with holotype (female prep. PT-1353 figured) (BMNH, NMV).

Description. General appearance dark brown, except for head, pronotum and antennae which are pale reddish-brown to ochreous.

Male genitalia, although basieally similar to *G. fijiana*, differ in details. Ventral processes of sternites 6 and 7 small, both branches of inferior appendages bluntly rounded at apex, distal margin of sternite 9 extended into broad triangular lobe, however, not reecssed on either side, segment 10 in lateral view depressed apieally.

Female abdomen terminates with segment 10 formed by laterally somewhat flattened lobes, separated mesally by deep, narrow exeision.

Length of forewing: ♂ 5.5-6 mm; ♀ 7.5 mm.

Distribution. Vanuatu (known from type loeality only).

Remarks. A group of speeimens from Vanuatu (New Hebrides) was noted by Kimmins (1958) as being darker than the speeimens of *Goera vunida*(*G. fijiana*) from Fiji. He also eommented that there are no signifieant differenees in the male genitalia. The eleared preparations, however, show differences regarded as sufficient for speeies separation.

Goera fijiana Banks

Goera fijiana Banks, 1924:444.
Goera vunida Mosely, 1941:362, figs. 1-4. syn. nov.

Type material.

Holotype ♂, Fiji, Viti Levu, Nandarivatu (17°34′S., 177°58′E.), W.M. Mann (MCZ 14819). Type examined.

Holotype of *Goera vunida* Mosely, Viti Levu, Vunindawa (17°49′S., 178°19′E.), 31 Mar 1933 (BMNH); paratypes ♂, ♀, collected with holotype, examined.

Distribution. Fiji.

Remarks. The examination of eleared abdominal preparation of the holotype of *G. fijiana* confirmed that *G. vunida* is indeed synonymous with *G. fijiana*, a possibility already expressed by Mosely (1941).

Calamoceratidae

Anisocentropus hyboma sp. nov.

Figures 33-35

Type material.

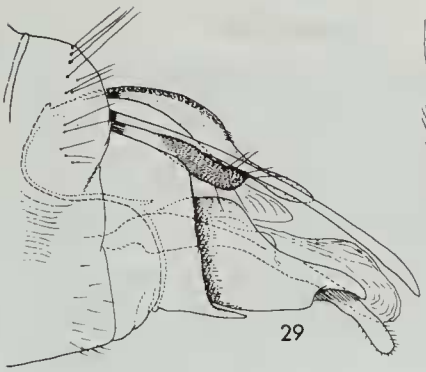
Holotype ♂, New Guinea, Papua New Guinea, Port Moresby (9°30′S., 147°10′E.), Mt Lawes, 400 m, 5 Mar-12 May 1963, W.W. Brandt (ANIC).

Figures 29-32. *Goera aneityuma* sp. nov.: 29, male genitalia lateral; 30, male genitalia ventral; 31, female genitalia lateral; 32, female genitalia ventral.

Figures 33-35. *Anisocentropus hyboma* sp. nov.: 33, male genitalia lateral; 34, male genitalia dorsal; 35, female, vaginal sclerite ventral.

Figures 36, 37, *Anisocentropus pictilis* sp. nov.: 36, male genitalia lateral; 37, male wing pattern: c–cream; dg–dark grey; g–light grey with metallie blue sheen; r–russett.

Figures 38-43, *Symphitoneuria liemetica* sp. nov.: 38, male genitalia lateral; 39, male genitalia dorsal; 40, male genitalia ventral; 41, male wing venation; 42, female genitalia lateral; 43, female genitalia dorsal.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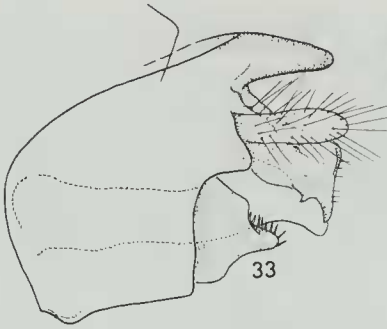
30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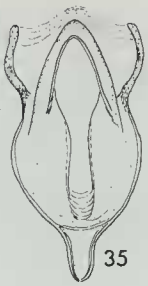
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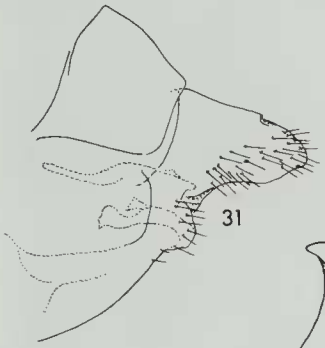
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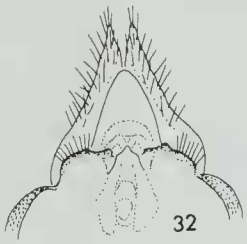
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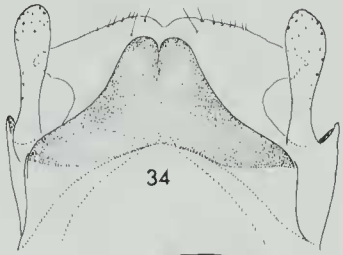
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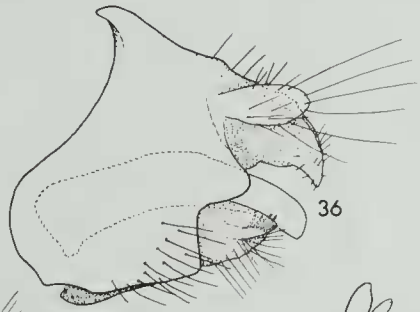
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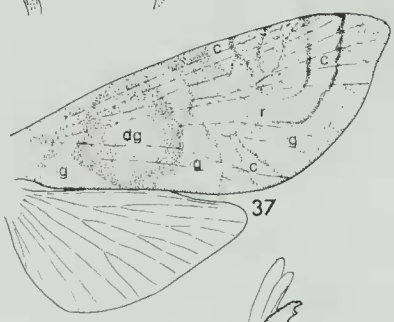

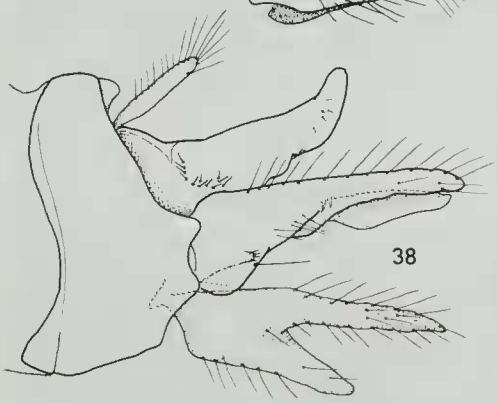
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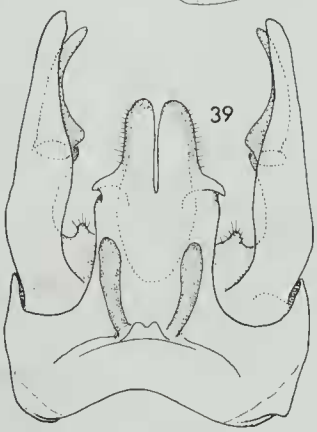
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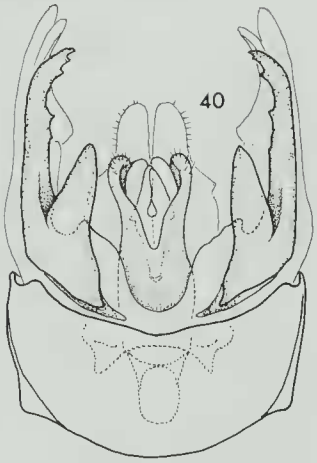
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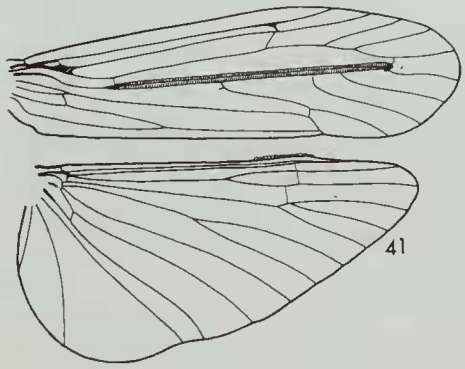
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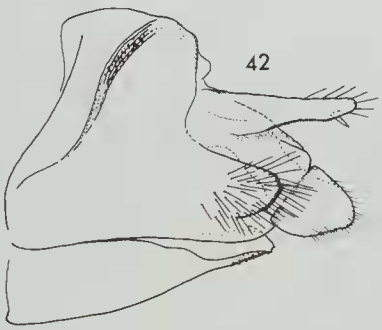
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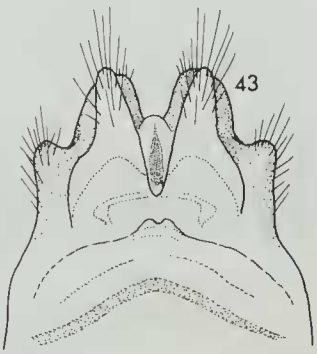
43

Paratypes 2♂♂, collected with holotype (ANIC, NMV) (genitalia prep. PT-1215 figured).

Description. Head dorsally dark brown, highly shiny with only a few black setae, antennae slender, segments dark brown basally becoming paler distally, each with a narrow ring of snow-white scales; maxillary palpi densely covered with black, erect setae giving a 'bottle brush' appearance.

Forewings dark brown, wing membrane highly shiny, costal half covered with blackish hairs to vein M; wing portion between M and A, particularly distal area, densely covered with short coppery coloured hairs; hindwings dark brown with light sprinkling of coppery coloured hairs.

Male genitalia with distal margin of tergite 9 extended into robust triangular hood-shaped projection, slightly incised mesally, inferior appendages very short.

Female similar in colouration to the male; vaginal sclerite as illustrated in Fig. 35.

Length of forewing: ♂ 8-8.5 mm; ♀ 8.7 mm.

Distribution. New Guinea.

Anisocentropus pictilis sp. nov.

Figures 36, 37

Type material.

Holotype ♂, Woodlark Island, Kulumadau (9°03'S., 152°43'E.), 20 Jan-6 May 1957, W.W. Brandt (ANIC) (genitalia prep. PT-1216 figured).

Description. Forewings with distinct colour pattern of grey with light metallic blue sheen, dull dark grey, russett and cream; an obvious dark grey round marking at basal half of forewing; hindwing uniformly grey.

Antennae about twice the length of forewings, cream, gradually becoming darker near the base.

Female unknown.

Length of forewing: ♂ 10.5 mm.

Distribution. Woodlark Island (known from type locality only).

Remarks. This species closely resembles the New Guinean species *A. io* Kimmins, but differs from the latter by large unicolorous grey circular spot near the base of forewing.

Leptoceridae

Symphitoneuria licmetica sp. nov.

Figures 38-43

Type material.

Holotype ♂, New Caledonia, Mandjelia (20°24'S., 164°32'E.), above Pouebo, 600-750 m, 11-13 May 1984, G. Monteith and D. Cook (NMV T-8222).

Paratypes 1♂, collected with holotype (genitalia prep. PT-1332 figured); 1♀ Aoupinie (21°10'S., 165°18'E.), 20 km NE. of Poya, 650 m, 18-19 May 1984, G. Monteith and D. Cook (genitalia prep. PT-1333 figured); 1♂ Grottes d'Adio (at light), 25 Dec 1965, Biospel. Exped. (SAM).

Description. Wings pale greyish brown with irregular pale spots. Some characters resemble those of the genus *Lectrides*. Forewing venation differs between sexes; in male most of R_{4+5} and M forms a longitudinal fold at midwing; in female venation normal; hindwing venation similar in both sexes, fork 1 absent.

Male genitalia with lateral lobe of segment 9 bluntly bilobed; superior appendages moderately long, rounded apically; segment 10 long, upcurved apically, deeply incised mesally; inferior appendages three-branched, the lower branch large, strongly bipointed, almost as long as the upper branch Phallus short with distinct lateral lobes near the apex.

Female abdominal segment 9 forms laterally extended lobes; a pair of somewhat triangular processes dorsally above segment 10.

Length of forewing: ♂ 11 mm; ♀ 10 mm.

Distribution. New Caledonia.

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